This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (original): An acceleration sensor comprising a bimorph type acceleration detection element including a pair of surface acoustic wave resonators coupled to each other with the back surface of one resonator bonded to the back surface of the other resonator, wherein each resonator includes a piezoelectric substrate and a pair of IDT electrodes which are arranged on the front surface of said piezoelectric substrate,

wherein said acceleration detection element is supported at an end thereof such that said acceleration detection element is deflected in the thickness direction of the piezoelectric substrate under acceleration, and

wherein acceleration is detected by differentially detecting a frequency change or an impedance change of said two surface acoustic wave resonators which is caused by the deflection of the acceleration detection element.

Claim 2 (canceled)

Claim 3 (original): An acceleration sensor comprising a bimorph type acceleration detection element including a pair of surface acoustic wave resonators coupled to each other with the back surface of one resonator bonded to the back surface of the other resonator, wherein each resonator includes a glass substrate, a pair of IDT electrodes which are arranged on the front surface of said glass substrate, and a piezoelectric film which is deposited on said glass substrate including said IDT electrodes,

wherein said acceleration detection element is supported at an end thereof such that said acceleration detection element is deflected in the thickness direction of the glass substrate under acceleration and

wherein acceleration is detected by differentially detecting a frequency change or an impedance change of said two surface acoustic wave resonators which is caused by the deflection of the acceleration detection element.

Claim 4 (canceled)

Claim 5 (original): An acceleration sensor according to Claim 1, comprising:

a pair of casing members respectively arranged on two opposed side surfaces of said acceleration detection element facing in a direction in which acceleration is applied, said each casing member having a recess in the portion thereof at least facing the IDT electrodes and bonded on both ends thereof; and

a pair of covering members respectively bonded around the peripheral outline portions thereof to two open surfaces defined by said acceleration element and said casing members,

wherein said IDT electrodes arranged on said two surface acoustic wave resonators are respectively connected to external electrodes arranged on the external surfaces of said covering members via electrodes arranged on the surfaces of said casing members.

Claim 6 (original): An acceleration sensor according to claim 1, comprising a pair of casing members respectively arranged on two opposed side surfaces of said acceleration detection element facing in a direction in which acceleration is applied, said each casing member having a recess in the portion thereof at least facing the IDT electrodes and bonded on the entire peripheral outline portion thereof,

wherein said IDT electrodes arranged on said two surface acoustic wave resonators are connected to terminal electrodes provided along side edges of said acceleration detection element, and said terminal electrodes are respectively connected to external electrodes arranged on the external surfaces of said casing members.

Claim 7 (original): An acceleration sensor according to claim 1, wherein said two surface wave resonators oscillated at different frequencies, a difference between the oscillated frequencies is detected, and a signal proportional to acceleration is determined from the frequency difference.

Claim 8 (original): An acceleration sensor according to claim 1, wherein said two surface acoustic wave resonators are oscillated at the same frequency, one of a phase difference and an amplitude difference is obtained from a difference between electric impedance of said two resonators, and a signal proportional to acceleration is determined from one of the phase difference and the amplitude difference.